



Science Policy

September 2023

Baines Endowed Science Policy September 2023

1. Aims and Objectives

1.1 At Baines Endowed School, we believe that all pupils must have regular access to Science appropriate to their age and stage of development and that due regard should be given to this as a "core" subject.

Teaching Science allows children to experience and explore the world around them. It develops their understanding of scientific ideas and makes links between phenomena and experiences. Science in our school aims to stimulate the children's curiosity and creative thought and teaches methods of investigation and enquiry. Children learn to ask scientific questions, use scientific vocabulary and appreciate how Science can affect their future on a personal, national and global level.

1.2 Learning opportunities will be building upon and incorporating the proposals in 'The Science Programmes of Study: Key Stages 1 and 2' of the National Curriculum in England (September 2013)

1.3 The national curriculum for science aims to ensure that all pupils:

- develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics
- develop understanding of the **nature, processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the **uses and implications** of science, today and for the future.

1.4 Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

(Science Programmes of study: key stages 1 and 2 National Curriculum in England 2013)

2. Teaching and Learning

2.1 The Science curriculum at the moment can be delivered as a discrete

subject or through the creative curriculum and is taught by class teachers. As a school we are following the Kapow Scheme of Work for Science across all Key Stages. We aim to make links between Science and other subjects.

2.2 A variety of teaching methods are employed as appropriate and science regularly involves the children in practical work, through a mixture of small-group activities and whole class activities.

2.3 Teaching methods include whole-class teaching, group work, problem solving and open-ended investigation.

2.4 Science in the Reception Class is planned for based on the requirements of the Early Years Foundation Stage. It is planned as part of a creative curriculum based on half termly topics and on the interests and needs of the individual children. Science makes a significant contribution to the objective in the ELGs of developing a child's knowledge and understanding of the world.

2.4 Children are encouraged to ask, as well as answer questions, and are given the opportunity to compile and use a variety of data, such as statistics, graphs, pictures and photographs.

2.5 I.C.T is used in Science lessons where it enhances learning, including the internet, software, iPad applications and digital photography.

2.6 Homework is used to support school and class activities. This relates to the school's overall homework policy.

2.7 We recognise that there are children of widely different scientific abilities in all classes and we ensure that we provide learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this in a number of ways:

- Setting common tasks which are open ended and can have a variety of responses;
- Setting tasks of increasing difficulty;
- Grouping children of different ability and setting different tasks;
- Providing resources of different complexity;
- Using classroom assistants to support individual children or groups.

2.8 By developing a blend of in-school and distance learning, teachers can support students and help to individualise learning, increase learners' autonomy, motivation and agency and improve learning skills towards becoming self-directed learners.

To do this in Science, teachers will set and respond to tasks using online platforms such as Purple Mash, Class Dojo etc. These will be used as homework or work to be completed in school.

Teachers may share videos with parents/carers and children to introduce new units of work. These will highlight learning from previous year groups (where applicable) and the skills that children will have used before and are to build upon. Key vocabulary to be used in the forthcoming unit and skills to be developed will also be introduced.

3. Online Safety

Due to the increase in use of internet connected devices and more work being completed online, online safety is an essential part of all curriculum areas.

In Science the children may be expected to complete work online in school or at home.

Online safety is taught as a discrete part of the computing curriculum and reinforced through regular, safeguarding assemblies. Nevertheless, when the internet is used for Science, children are reminded of the golden rules of online safety:

- Don't share personal information
- Be polite, kind and respectful
- Tell a trusted adult if you come across something that makes you feel uncomfortable or unhappy

4. Equal Opportunities in Science

Science is taught within the guidelines of the school's equal-opportunities policy:

4.1 We ensure that all children have the opportunity to gain science knowledge and understanding, regardless of gender, race, physical or intellectual ability. Our expectations do not limit pupil achievement and assessment does not involve cultural, social, linguistic or gender bias.

4.2 We recognise that Science may strongly engage our more able pupils and we aim to challenge and extend them.

4.3 Science teaching and learning will be supported through Learning Outside the Classroom in addition to class-based activities, to support children with different learning styles and needs.

5. Assessment and Record Keeping

We use assessment to inform and develop our teaching.

5.1 Topics commonly begin with an assessment of what the children already know.

5.2 We assess children's work in Science by making informal judgements as

we observe them during lessons. On completion of a piece of work, the teacher marks the work, providing comments which move the children forward in their learning.

5.3 The school is developing a wider variety of ways to record work, such as the use of big books, photographs, I.C.T and displays.

5.4 Each class teacher records individual pupil progress on a tracking sheet, which is monitored and passed on at the end of the academic year in assessment folders.

6. The Role of the Science Subject Leader

6.1 The Science subject leader is Rachel Bennett. The link teaching assistant is Lisa Lowe.

6.2 It is the role of the subject leader to:

Provide leadership in the development of Science learning throughout the school by:

- Providing advice, support and guidance in the field of Science;
- Observing lessons and team teaching;
- Ensuring good planning and assessment activities support and enhance the delivery of the science curriculum;
- Maintaining Science resources to support teaching and learning and managing the Science budget;
- Liaising with the Science Link Governor and reporting to the Learning and Achievement Committee in order to keep the governing body informed of standards of learning in Science in the school and new developments in Science education;
- Ensuring that statutory requirements within the National Curriculum for Science and assessment are met;
- Fostering cross-curricular links through the Creative Curriculum.

7. Equipment and Consumable Resources

7.1 The school is adequately equipped and continues to develop Science resources. Equipment has and will be purchased to meet the requirements of the National Curriculum.

7.2 The school has a range of IT resources suitable for use in scientific investigations.

7.3 Teachers make extensive use of Interactive Whiteboard resources in their teaching and planning.

8. Health and Safety

8.1 Staff should refer to the ASE 'Be Safe' book with regards to safety in Science lesson. This book is located in the main Science store cupboard.

8.2 Further support and guidance can be found either online or over the telephone to CLEAPSS with whom we members.

8.3 Some Risk Assessments are readily available on the H drive.

8.4 Children should be made aware of the hazards associated with the misuse of some apparatus. It is the responsibility of the class teacher to ensure that pupils are aware of these dangers and adhere to clearly established rules and guidelines, which are echoed by supporting staff.

9. Storage / Organisation

9.1 Science equipment is stored in the large cupboard in the main corridor and returned after use.

9.2 Some classrooms have their own box of basic scientific equipment relevant to their year group topics.

R Bennett
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